

Unit 2: Diddley Bows, Slide Guitar and the Blues

Concepts

Blues scale: A six note scale which includes the following six notes from a major diatonic scale: 1st, flat 3rd (lowered a half step), 4th, flat 5th (lowered a half step), 5th and flat 7th (lowered a half step). The lowered notes (3rd, 5th and 7th) are referred to as blue notes.

Bukka White (1909-1977) was an [American Delta blues](#) singer and guitarist noted for an expressive voice and strong slide guitar technique.

Constructive Interference: The interference of two or more waves which produces a greater amplitude equal to the sum of the amplitudes of the individual waves.

Destructive Interference: The interference of two or more waves which produces a lower amplitude equal to the difference of the amplitudes of the individual waves.

Diatonic scale: Seven note scale with the eighth note being the first note raised by an octave. A major diatonic scale has the following steps: whole, whole, half, whole, whole, whole, half.

Diddley bow: a single-stringed [American](#) instrument which influenced the development of the [blues](#) sound. It consists of a single string of wire strung between two nails on a board over a glass bottle or other bridge. It is a descendant of bowed instruments played in Africa.

Dobro guitar: A particular style and brand of [resonator guitar](#) using a single conical resonator. Dobro guitars have a wooden body.

Fundamental frequency: The lowest natural frequency for an object

Harmonic: frequencies at which strings vibrate which are integer multiples of the fundamental frequency

Joseph Kekuku (1874–1932): a Hawaiian guitar player regarded as the inventor of the [slide guitar](#).

Lap steel guitar: The lap steel guitar is a type of [steel guitar](#) in which the player changes pitch by pressing a metal or glass bar against the strings instead of by pressing strings against the [fretboard](#). It typically refers to a solidbody guitar containing an electrical pickup.

Mississippi Delta: agricultural region in Northwest Mississippi between the Mississippi and Yazoo Rivers known for its former cotton production (19th century) and the location of the origin of Blues music.

National guitar: a particular style and brand of [resonator guitar](#) using between one and three inverted, conical resonators. National guitars typically have a metal body.

Natural frequency: The frequency or frequencies at which an object tends to vibrate at when hit, struck, plucked, strummed or somehow disturbed

Pedal steel guitar: The pedal steel guitar is a type of [electric steel guitar](#) that is built on legs or a stand and is fitted with foot pedals which adjust the sound of the instrument. Like other electric guitars, the musical instrument produces sound by the vibration of its strings which are converted by [magnetic pickup](#) connected to an amplifier.

Resonator Guitar: A style of acoustic guitar with an internal cone or other object which vibrates to amplify or project the sound of the guitar.

Robert Johnson (1911-1938): was an [American blues](#) singer and [guitarist](#), noted for his expressive vocals, guitar mastery, songwriting and uniquely evocative lyrics.

Son House (1902-1988): was an [American blues](#) singer and [guitarist](#), noted for his highly emotional style of singing and primitive but dramatic [slide guitar](#) playing.

Standing wave: a pattern produced physically in a vibrating string or in air pressure locations which is the result of constructive and destructive interference and results in a wave with stationary appearance.

Steel guitar: a type of [guitar](#) developed in Hawaii in the late 19th and early 20th centuries. It is usually positioned horizontally; strings are plucked with one hand, while the other hand changes the pitch of one or more strings with the use of a bar or slide called a **steel**.

Superposition: The overall displacement of a medium at any point in space or time, is simply the **sum** of the individual wave displacements*. It is the simple mathematical explanation for constructive and destructive interference.

*physical movement of a string **OR** change in air pressure)

Skills

Be able to

use work with materials and tools to build functional Diddley Bow

label neck of Diddley Bow with (fret) markers to indicate diatonic scale

perform a tune on the Diddley Bow

use vibrating string equation to determine an unknown

explain standing waves and how they relate to harmonics

identify various string instruments from the Mississippi Delta

Assesment:

Constructed Diddley Bow

Video or performance of Diddley Bow

Test on remaining skills/concepts above